



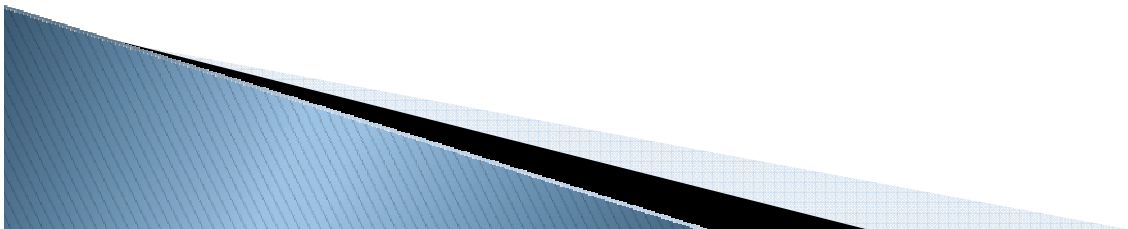
Indiana State
Department of Health

Ryan Gentry

ISDH syndromic surveillance epidemiologist

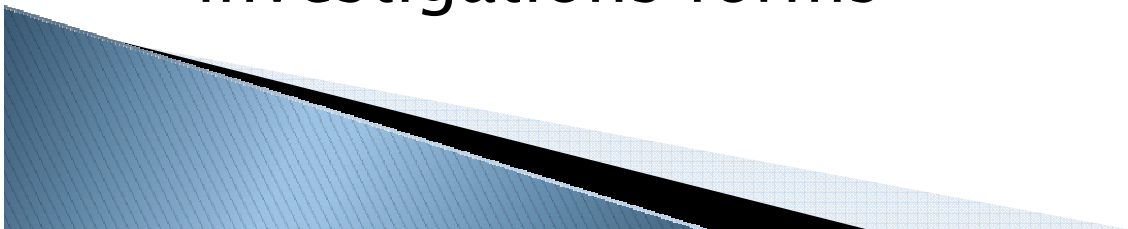
objectives

- ▶ Define what I–NEDSS is and the history of the project
- ▶ Provide an update on the current status of the State–wide rollout
- ▶ Discuss benefits and challenges of electronic disease reporting and surveillance

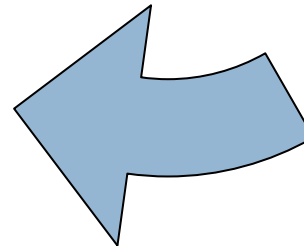
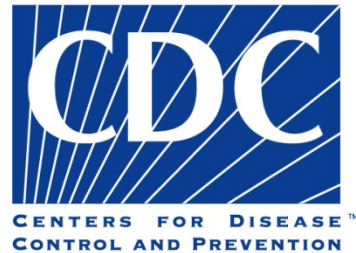
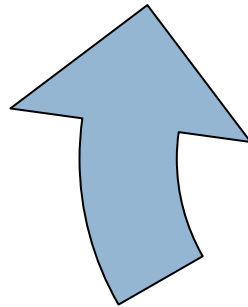
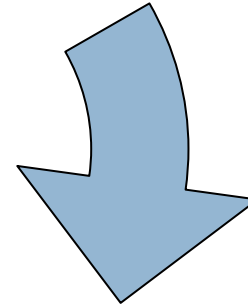
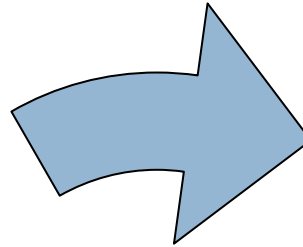


what is I-NEDSS?

- The Indiana National Electronic Disease Surveillance System (I-NEDSS) is a web-based application that promotes the collection, integration, and sharing of data at federal, state, and local levels
- The purpose of I-NEDSS is to automate the current process for reportable diseases, as defined by IAC 410
- The system includes lab reports, communicable disease reports (CDRs), and ISDH case investigations forms



what is I-NEDSS?

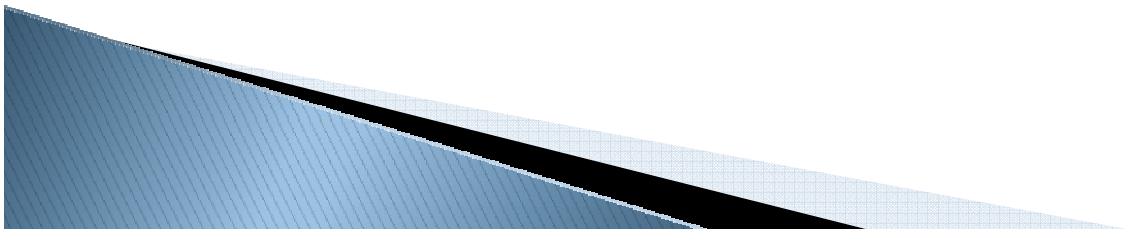


Indiana State
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project objectives

- ▶ Increased speed
- ▶ Increased accuracy
- ▶ Increased accountability
- ▶ Increased security
- ▶ Increased situational awareness for state and local investigators



project history

2001–2006

ISDH searches for an electronic disease reporting solution

2007

PHPER is tasked with finishing development and deployment

late 2007

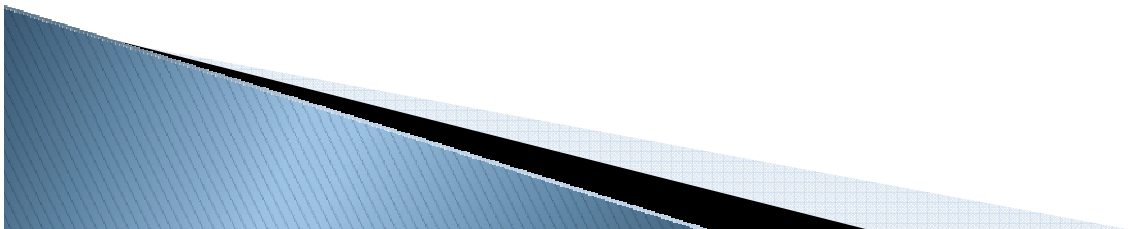
Notification module completed and LHD pilot enrollment started

Spring 2008

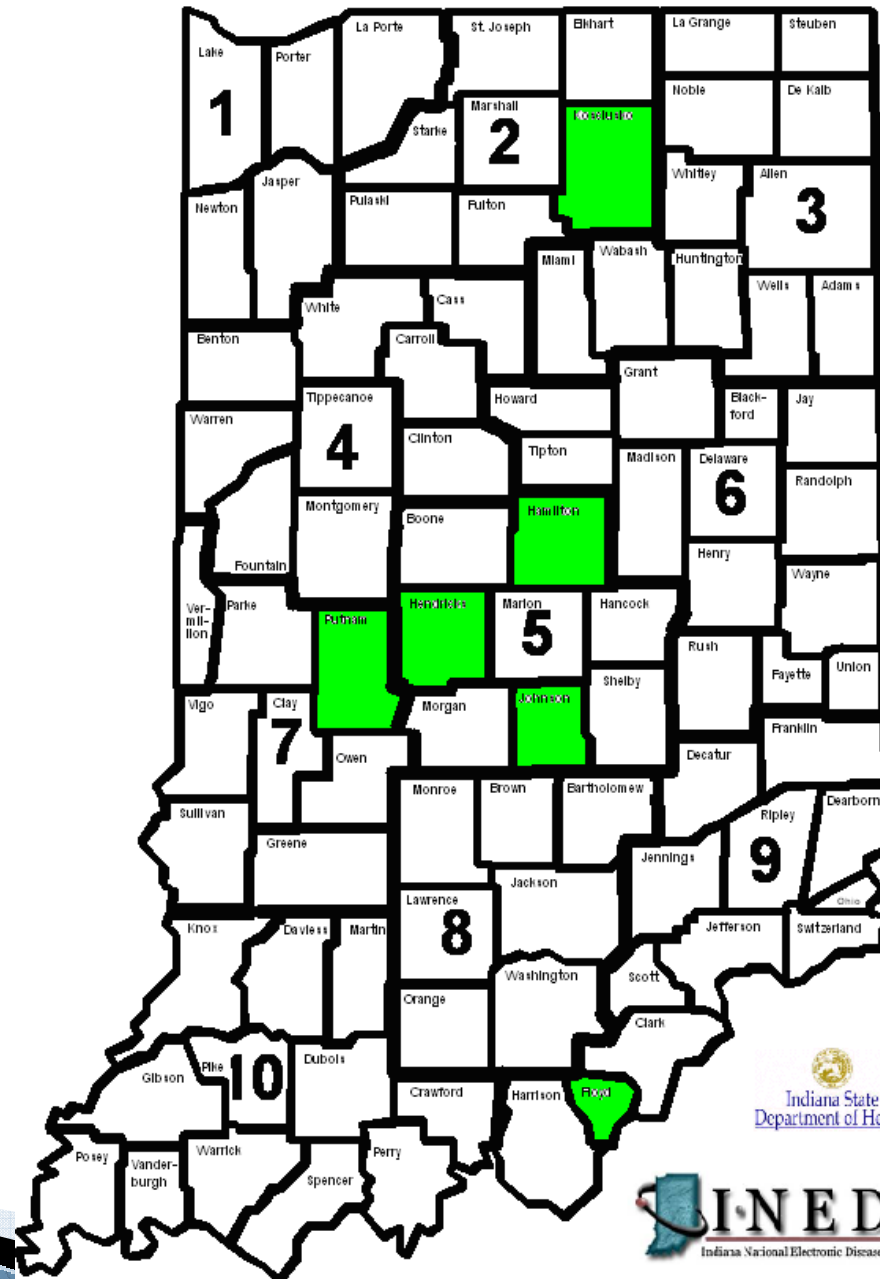
6 LHD's and 12 hospital IP's are trained for the pilot

Summer 2008

Case Investigation Module completed and released to pilot counties



I-NEDSS Pilot Counties



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I-NEDSS
Indiana National Electronic Disease Surveillance System

project history

Fall 2008

- Expanded LHD pilot to 12 more counties

late 2008

- National reporting module completed and CDC

- PHIN certification completed for select conditions

early 2009

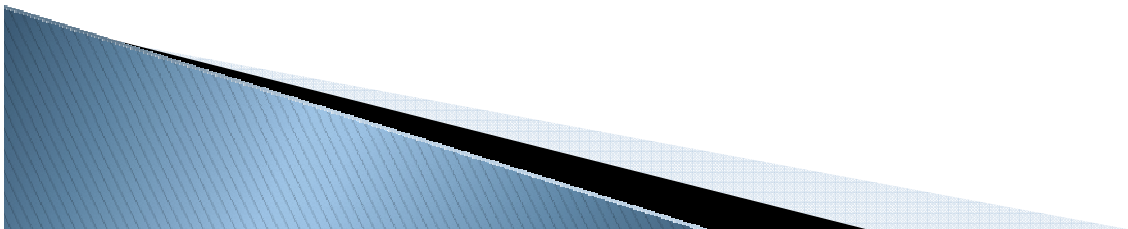
- Expanded LHD to 5 more counties

Spring 2009

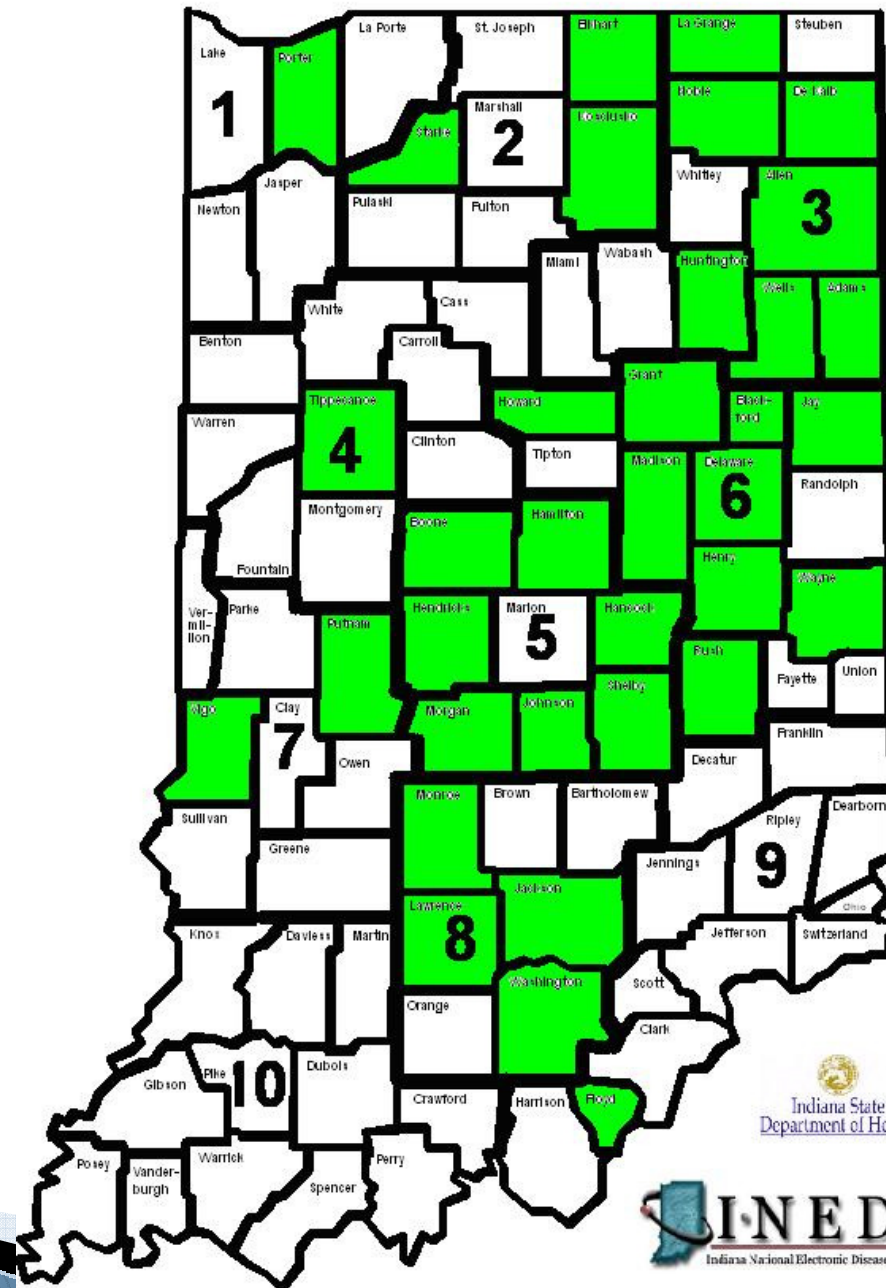
- Completed two district trainings in Districts 6 & 3

May 2009

- 30 counties trained and several hospitals



I-NEDSS PARTICIPATING COUNTY HEALTH DEPTS
May 1, 2009



Indiana State
Department of Health

I-NEDSS
Indiana National Electronic Disease Surveillance System

project history

late 2009

10 district trainings completed, 61 local health departments participating and over a dozen hospitals

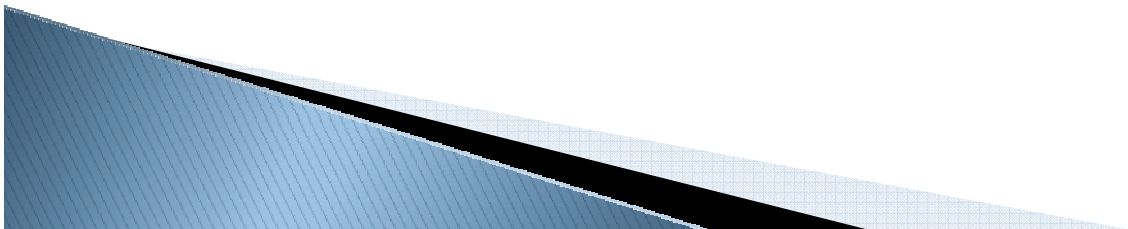
early 2010

Established I-NEDSS User Panel, comprised of LHD, hospital, and ISDH users to help guide the development of the system

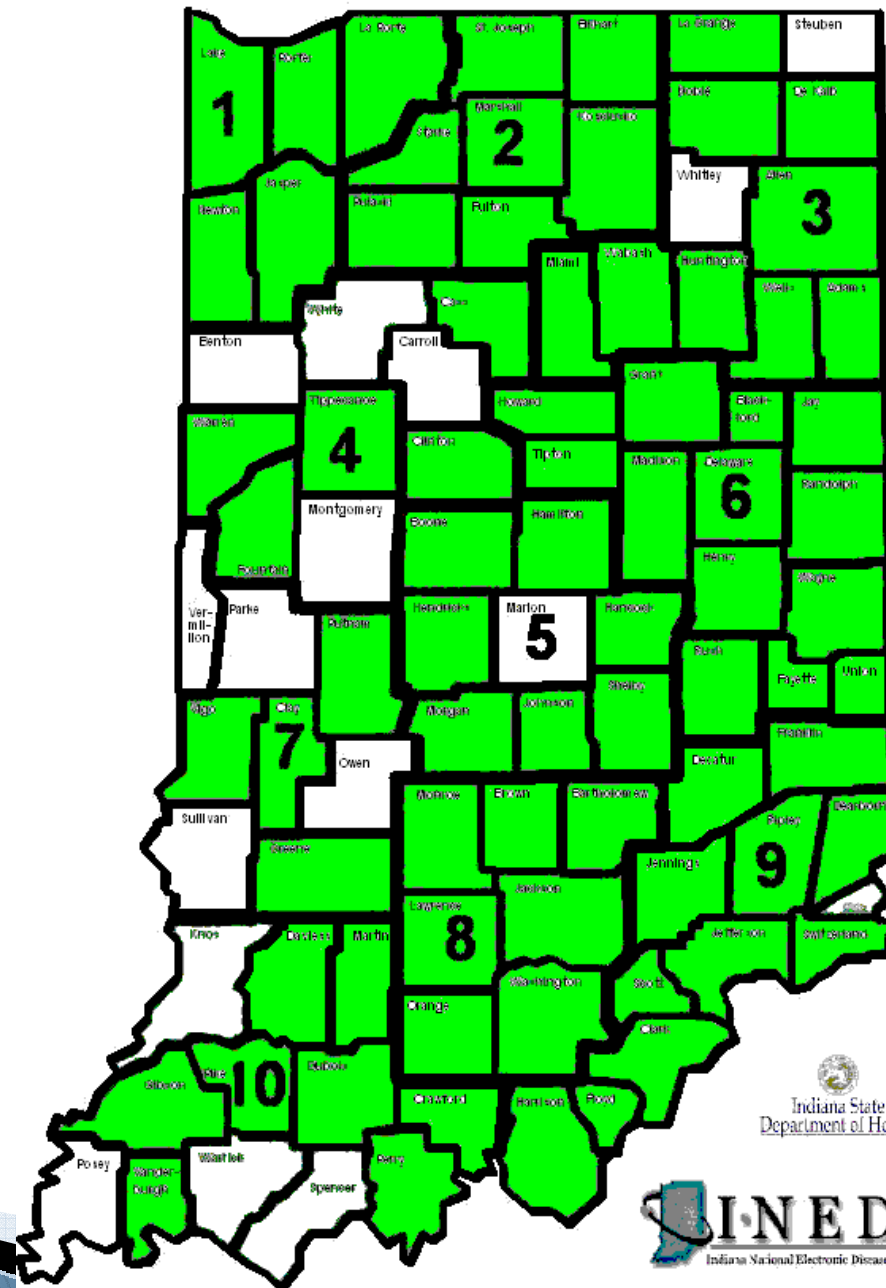
May 2010

78 local health departments participating, almost two dozen hospitals. Scheduling meetings with APIC regions to bring on more hospitals.

STD's can be reported in I-NEDSS using the electronic CDR form.



I-NEDSS PARTICIPATING COUNTY HEALTH DEPTS
April 12, 2010

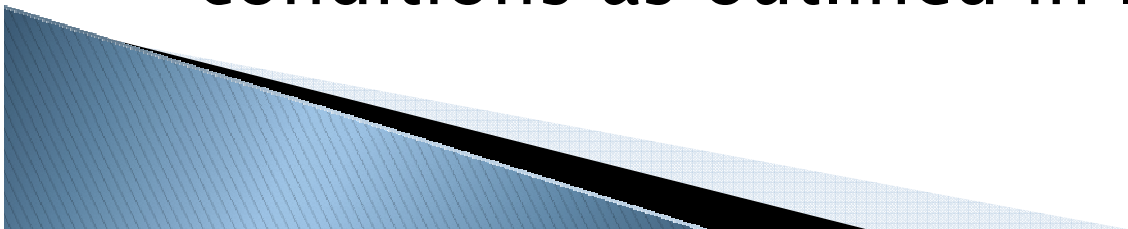


Indiana State
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I-NEDSS
Indiana National Electronic Disease Surveillance System

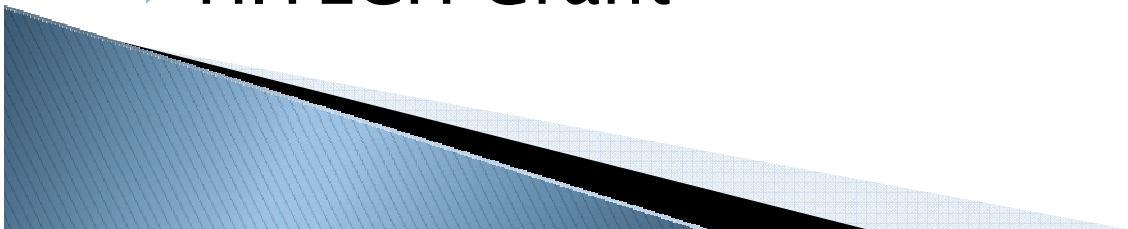
what components make up I-NEDSS?

- ▶ Notification Module – Health care providers and laboratories submit electronic lab reports (ELRs) and communicable disease reports (CDRs) to the appropriate investigative unit at the local or state level
- ▶ Users– IP's, Physicians, Laboratories, and other Health Care Providers who are responsible for reporting notifiable conditions as outlined in IAC 410



electronic lab reporting

- ▶ Electronic Lab Reports (ELRs) from Regenstrief Institute for Indiana Network for Patient Care (INPC) connected laboratories
- ▶ ELRs from the State Public Health Lab through Starlims
- ▶ ELRs from Mayo Laboratories, ARUP, Quest Diagnostics, and Alverno
- ▶ Labs reported directly through I-NEDSS
- ▶ I-NEDSS receives over 100 ELR's a day
- ▶ HITECH Grant



CDR reporting

Communicable Disease Report

Name: JOHN RICHARDS
Country of Residence: UNITED STATES
Date of Birth: 10/13/1981
Gender: MALE
[Demographic Information \(View Data by ID\)](#)

Onset: 10/15/2018 (Date) [?] [v]
Report Date: 10/24/2018 [v]

Work/Location: (check all that apply, not required for STD)
☐ Health Care Worker
☐ Food Service
☐ School
☐ Child Care Setting
☐ Correctional Facility
☐ Long Term Care Facility

Part of an Outbreak? ☐ Yes ☒ No ☐ Unknown
Onset Agent: [?] [v]
Site of Infection: [?] [v]

Date of Exposure: [?] [v] ☐ Pending
Type: [?] [v] (select one)

Symptoms/Signs: (check all that apply)
☐ Abdominal Pain
☐ Cough
☐ Diarrhea
☐ Fever
☐ Headache
☐ Jaundice
☐ Nausea
☐ Rash
☐ Sore Throat
☐ Swelling
☐ Other

Date of Onset: [?] [v] (not required for STD)

End Patient Date? ☐ Yes ☒ No ☐ Unknown
Discharge Date: 10/24/2018 [v] Discharge Site: 10/24/2018 [v]

Treatment: 10/24/2018 [v] 10/24/2018 [v] (check all)
[?] [v] [?] [v]

Has Patient Been Informed of Exposure? ☐ Yes ☒ No ☐ Unknown

Last Test(s): 10/24/2018 [v] 10/24/2018 [v] Collection Site: 10/24/2018 [v] [v]
Comments: [?] [v]

Health Care Provider: [?] [v]
Reporting Facility Code: [?] [v] (select type of facility reporting the case)
Reporting Facility Type: [?] [v] (select one)
Facility: [?] [v] (select one)
Address: [?] [v] (select one)
Phone Number: [?] [v]
Name of Physician: [?] [v] (if different than reporting facility)
Address: [?] [v]
City: [?] [v]
State: [?] [v]
Zip Code: [?] [v]
Institution Number: [?] [v] (select one)
[?] [v]

[SAVE & RETURN](#) [SAVE & SUBMIT](#) [CANCEL](#)

LHD home screen

The screenshot shows the LHD home screen for the Indiana National Electronic Disease Surveillance System (INEDSS). The interface includes a top navigation bar with a 'Logout' link and a 'Home' button. Below this is a secondary navigation bar with links for 'Home', 'Training', 'CD List', and 'Support'. The main content area displays a 'Welcome' message, a system status message indicating the user is in a Q/A environment with test data, and a 'Notifications' section with three categories: Communicable Disease Report Notifications (1), Lab Report Notifications (0), and Case Investigation Notifications (0). The user's login status is shown as 'Ryan Gentry - Hamilton County Health Department (Local Health Dept - User)'.

[Logout](#)

Home | **I-Mail (4)** | **Patient** | **My Profile** | **I-Reports**

[Home](#) | [Training](#) | [CD List](#) | [Support](#) |

Login Status: Ryan Gentry - Hamilton County Health Department (Local Health Dept - User)

Welcome

This site is home to Indiana's version of the National Electronic Disease Surveillance System ([NEDSS](#)).

Please note that **you are working in the Q/A environment -- the data is TEST data ONLY** 9/8/2008 10:30:26 AM

[Release Notes](#)

Notifications

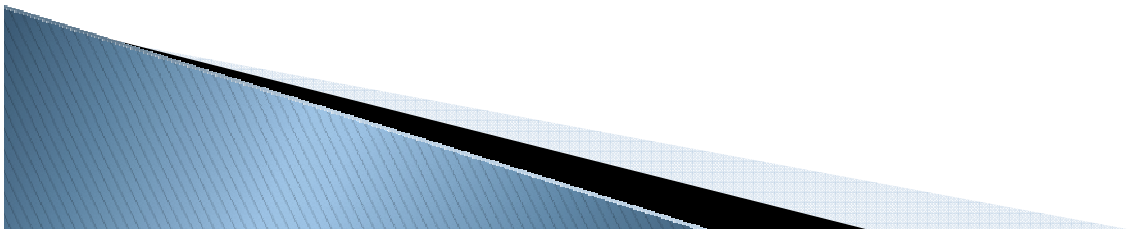
Communicable Disease Report Notifications (1) [Print](#) [Options](#)

Lab Report Notifications (0)

Case Investigation Notifications (0)

what components make up I-NEDSS?

- ▶ Case Investigation Module – Investigative unit conducts case investigation and reports results to ISDH electronically
- ▶ Users– Local Health Departments and ISDH Field Epidemiologist



case investigation screen

Investigation CDR (0) LAB (1) Attachments Worksheets

Print Options

Case Investigation - Lyme Disease

Demographics Clinical Lab Results Comments

Name: PILOT J. TEST
Patient ID: P105251
Mothers' Maiden: N/A
County: HAMILTON
Address: SOME CITY,
Telephone Number: N/A
Date of Birth: 10/2/2007
Age: 15 Months
SSN: N/A
Gender: MALE
Race(s): WHITE
Ethnicity: UNKNOWN
Physician's Name:
Phone Number:
Fax Number:
Address:
Occupation: N/A

EDIT

← →

case investigation screen

1

NEUROLOGIC:

☐ Yes ☐ No ☐ Unknown

Bell's palsy or other cranial neuritis?

☐ Yes ☐ No ☐ Unknown

Radiculoneuropathy?

☐ Yes ☐ No ☐ Unknown

Lymphocytic meningitis?

☐ Yes ☐ No ☐ Unknown

Encephalitis/Encephalomyelitis?

☐ Yes ☐ No ☐ Unknown

Antibody to B. burgdorferi higher in CSF than serum?

☐ Yes ☐ No ☐ Unknown

CARDIOLOGIC:

☐ Yes ☐ No ☐ Unknown

2nd or 3rd degree atrioventricular block?

☐ Yes ☐ No ☐ Unknown

Other Clinical:

Date of onset:

Date of diagnosis:

Date of report to health department:

OTHER HISTORY:

☐ Yes ☐ No ☐ Unknown

Was the patient hospitalized for the current episode?

☐ Yes ☐ No ☐ Unknown

Name of antibiotic used this episode:

Use in days:

Was the patient pregnant at the time of illness?

☐ Yes ☐ No ☐ Unknown

Where was the patient most likely exposed?

State:

Select a state

County:

Select a county

⬅

➡

[Prev Tab] [Next Tab]

[Go to the Top](#)

SAVE W/O SUBMIT

SAVE & SUBMIT

CANCEL

LHD my reports

Notifications

My Reports

Communicable Disease Reports (1)

Print Options

INEDSS ID	Condition	Patient Name	Report Date	Submitted	Reviewed		
218204	Anthrax	TESTJONES, JOHN	09/19/2008	✓	✓	View	File

Lab Reports (2)

Print Options

INEDSS ID	Condition	Patient Name	Date of collection	Reviewed		
218205	Anthrax	TESTJONES, JOHN	Unknown	✓	View	File
227903	Hepatitis B	SMITH, JOHN	Unknown	✓	View	File

[There are 26 pending investigations](#)

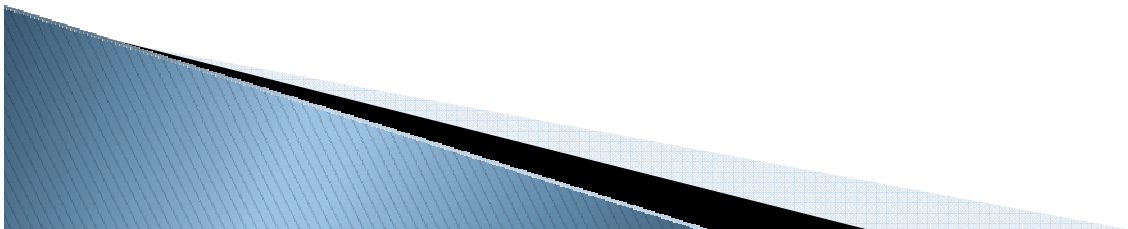
Case Investigation Reports (6)

Print Options

INEDSS ID	Condition	Patient Name	Start Date	Submitted	Reviewed	Changes Requested		
2008ANTH1	Anthrax	TESTJONES, JOHN	09/19/2008	✓	✗	✗	View	File
2009HEPA1	Hepatitis A	DOE, JOHN	01/22/2009	✓	✗	✗	View	File
2009HEPB3	Hepatitis B	SMITH, JOHN	02/11/2009	✗	✗	✗	View	File
2008HEPB9	Hepatitis B	TEST, MISSING	02/25/2009	✗	✗	✗	View	File
2008HEPC6358	Hepatitis C	TESTDOE, JOHN	03/06/2009	✗	✗	✓	View	File
2009LYME6	Lyme Disease	LOST, JIM	04/16/2009	✗	✗	✗	View	File

what components make up I-NEDSS?

- ▶ National Reporting Module – ISDH reports summary disease data to the Centers for Disease Control and Prevention (CDC) using the national Public Health Information Network (PHIN)
- ▶ Indiana is one of only 22 states with this ability and continues to lead the nation in electronic messaging to the CDC
- ▶ Users– ISDH Subject Matter Epidemiologists



case investigation ISDH epi review screen

Investigation

CDR (0)

LAB (1)

Attachments (0)

Worksheets

History

Case Investigation - Lyme Disease

Print Options

Record Number: 2008LYME14

Submitted for Review: 11/25/2008

Case Status:

Open

Event Date:

Reviewed: ☐

Condition Status:

Suspect

Imported Status:

Acquired in reporting state

Case Diagnosis:

- Select Diagnosis -

Save

Hide ▲

Demographic

Clinical

Lab Data

Comments

Status

Name: PILOT J. TEST

Patient ID: P105092

Mothers' Maiden: N/A

County: HENRY

Address: SOME CITY, IN

Telephone Number: N/A

Date of Birth: 7/8/2007

Age: 22 Months


SSN: N/A

Gender: MALE

Race(s): UNKNOWN

Ethnicity: UNKNOWN

patient file


 [Patient Demographics](#)


Name: PILOT J. TEST
Patient ID: P105237
Maiden Name: N/A
Mothers' Maiden: N/A
County: PORTER
Address: SOME CITY, IN
Telephone Number: N/A
Date of Birth: 3/25/1973
Age: 36 Years
SSN: N/A
Gender: FEMALE
Race(s): BLACK OR AFRICAN AMERICAN
Ethnicity: UNKNOWN
Physician's Name:
Phone Number:
Fax Number:
Address:
Occupation: N/A

EDIT DEMOGRAPHICS

Patient's Reports


Patient Notes

Reports for PILOT J. TEST. 



Grid Options: 

Communicable Disease Reports (0) —


* No Communicable Disease Reports exist for this person.

Grid Options: 

Lab Reports (1) —


INEDSS ID	Date of collection	Condition	Test Name	County	Reviewed
 218642	10/14/2008	Hepatitis B	Pilot Lab Test IgM	 Porter	

Show rows: 10 Page 1 of 1

Grid Options: 

Case Investigations (0) —

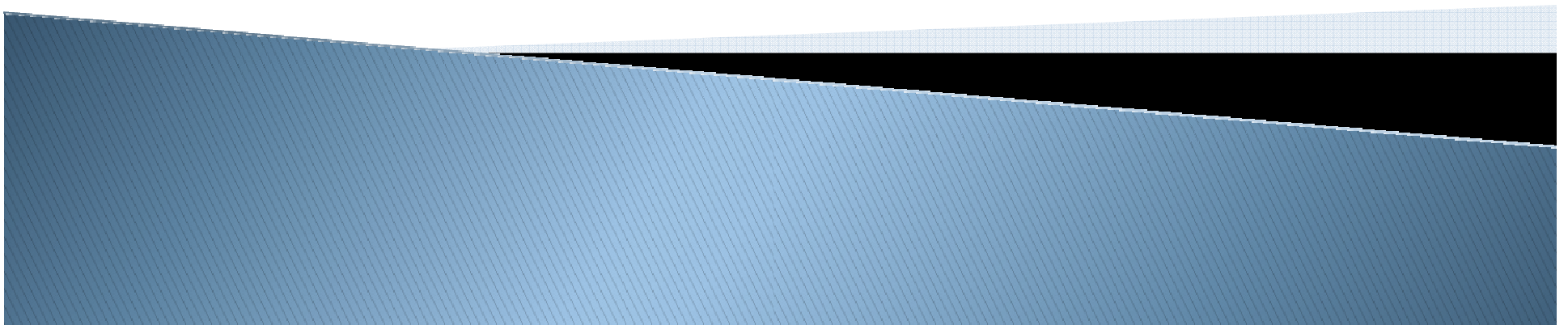
* No Investigations exist for this person.

Grid Options: 

Historical Reports (0) —

* No Historical Reports exist for this person.

how does I–NEDSS
affect notifiable
disease reporting?



how do I access I-NEDSS?

- ▶ Access to I-NEDSS is through the Indiana Health Data Center Portal

The screenshot shows the Indiana Health Data Center Portal. The header is a blue bar with the text "Indiana Health Data Center Portal". Below the header is a navigation bar with a "Main" link. On the left is a sidebar with an "Account Login" section containing fields for "Username" and "Password", and buttons for "Sign In", "Register", and "About". Below the login section is a "Forgot Your Password?" link. The main content area has a "Healthnet Portal Announcements" section with three items: "IHAN - How to sign up additional contacts" dated 8/10/2005, "Indiana Safety Net" dated 5/5/2004, and "The Bioterrorism Threat: Indiana Responds" dated 5/5/2004. Each item includes a small icon and a "read more..." link.

Indiana Health Data Center Portal

Main

Account Login

Username

Password

▶ Sign In


▶ Register

▶ About


Forgot Your Password?

Healthnet Portal Announcements


IHAN - How to sign up additional contacts 8/10/2005

 To sign up additional IHAN contacts that you want to receive an alert the same time as your IHAN Coordinator, add those users through the registration processes just as if you were the user. Access the registration process by clicking on the 'Register' button on the left hand menu (only visible if you're logged off). Use the contacts security code you received in the email.

Indiana Safety Net 5/5/2004

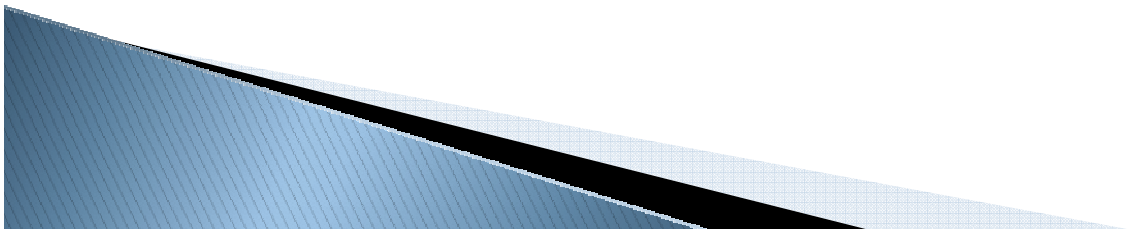
 Get the health and safety tips you need in one convenient location! Tips for Consumers, Children, Recreation and more! [read more...](#)

The Bioterrorism Threat: Indiana Responds 5/5/2004

 The Bioterrorism Threat: Indiana Responds -- a collection of three public broadcasting reports -- will detail specific bioterrorism threats in Indiana, examine our preparedness for an attack, and outline the ways in which Hoosiers should respond in the event of an attack. [read more...](#)

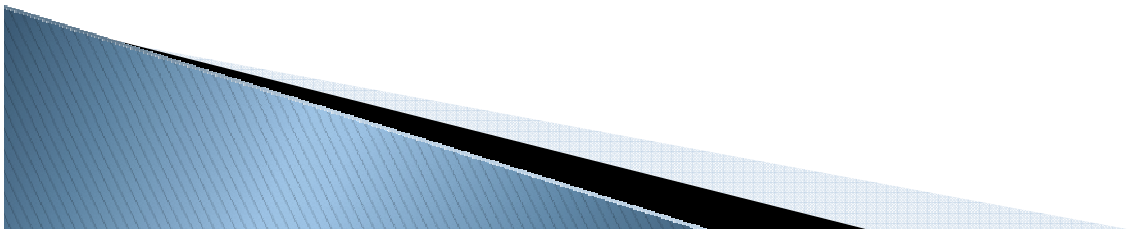
is the system secure?

- ▶ Yes, the information is collected and stored behind the ISDH firewall when you log into the Health Data Center Portal



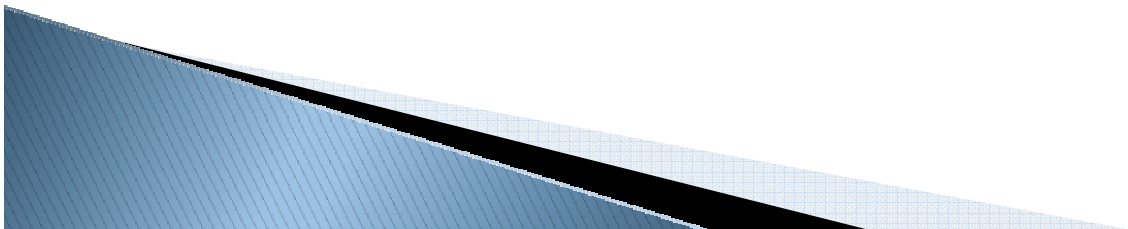
do I have to use I-NEDSS to report?

- ▶ No, I-NEDSS is just another option to use for reporting notifiable conditions



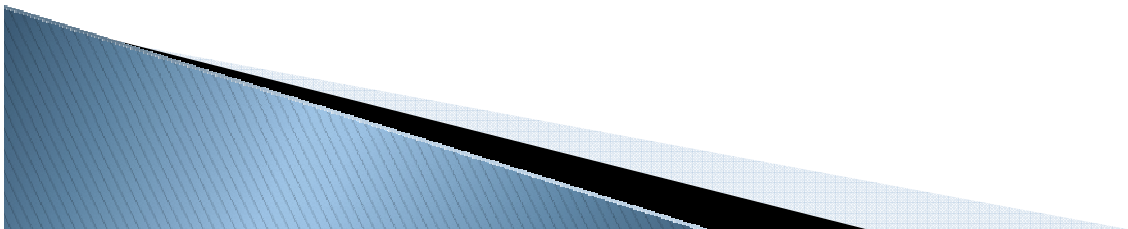
what are the benefits of using the system?

- ▶ I-NEDSS has several features that enhance reporting
 - I-Mail, a secure email tool for communicating with other I-NEDSS users
 - I-Reports, generate customizable reports for monthly or annual statistics
 - I-Forum, an in system discussion board for asking questions, posting best practices, or providing feedback
 - The ability to directly influence the improvement of electronic reporting in Indiana



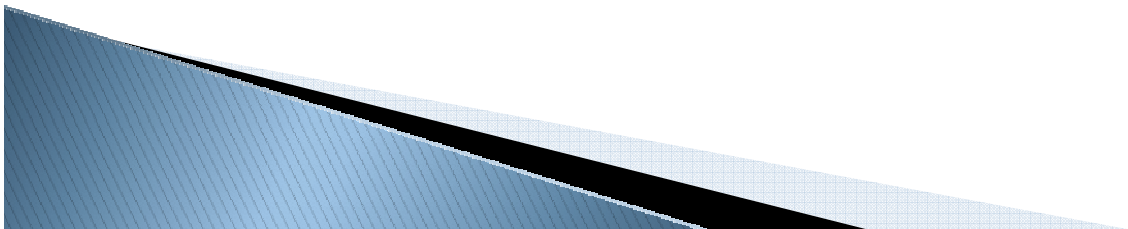
what support is available to system users?

- ▶ The I-NEDSS Helpdesk is available Monday–Friday, 8:00–4:00 at I-NEDSS@isdh.IN.gov
- ▶ And by phone at 317–233–7379



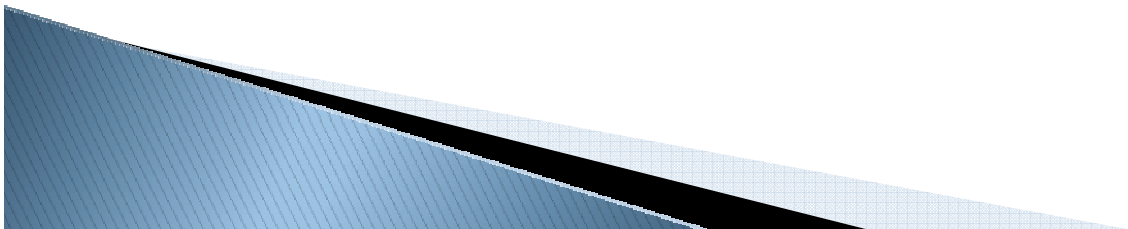
how do I get trained to use I-NEDSS?

- ▶ In 2010, we will be offering new and refresher training for any LHD that wants it.
- ▶ Please contact the I-NEDSS helpdesk to schedule an appointment.



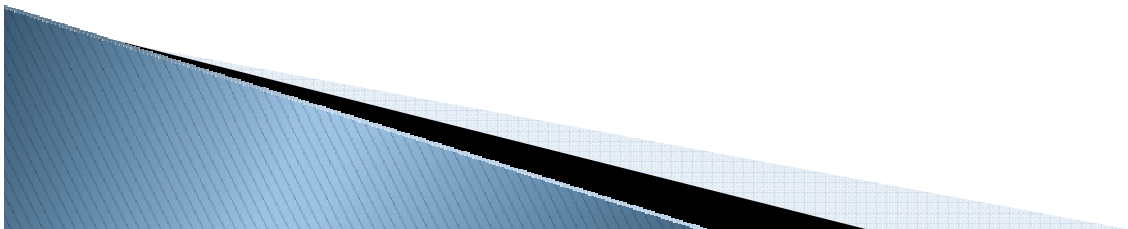
what is planned for future development of the system?

- ▶ Statewide rollout of I-NEDSS to hospitals in 2010
- ▶ Centralized administration module (CAM) for health departments to assist in assigning/reviewing investigations
- ▶ Improved transfer of data from CDR's and ELR's to case investigations
- ▶ TB reporting for hospitals



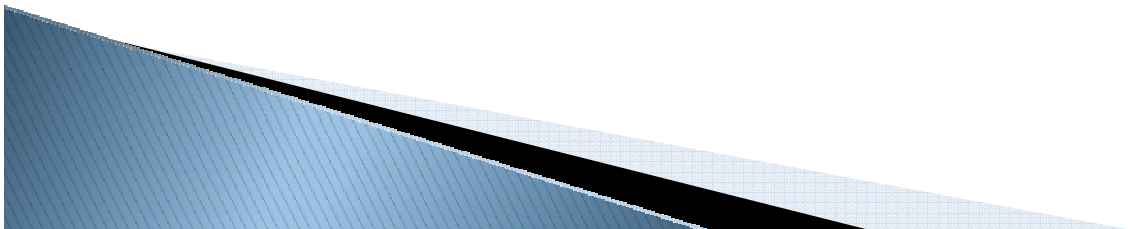
Challenges–2009

- ▶ Poor lab data quality, missing information
- ▶ Hospitals and physicians not onboard
- ▶ Decreasing budgets and increasing workloads
- ▶ Poor communication between state and locals
- ▶ Lack of IT resources
- ▶ Speed

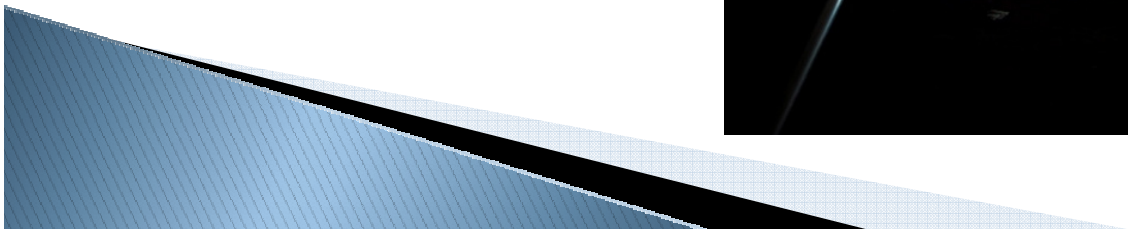
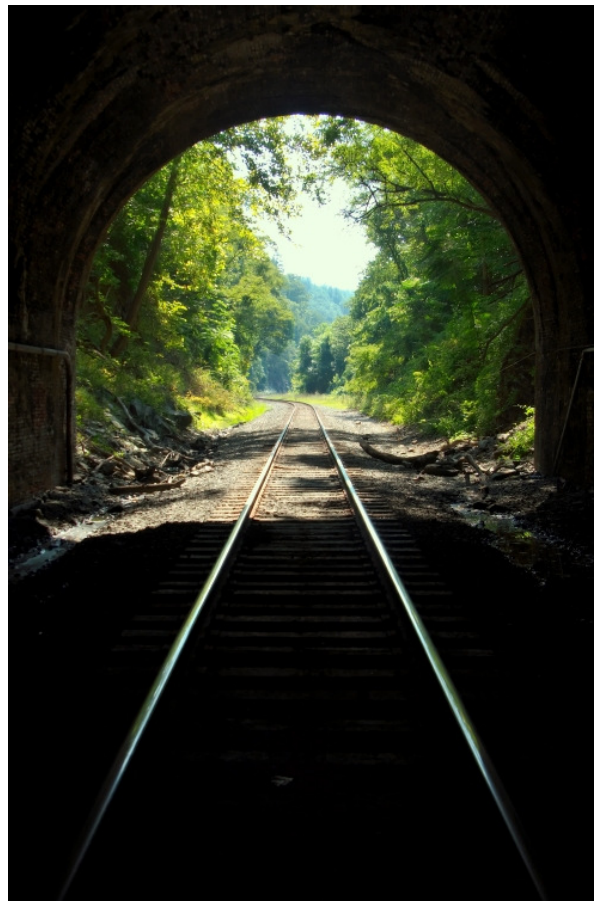


Challenges–2010

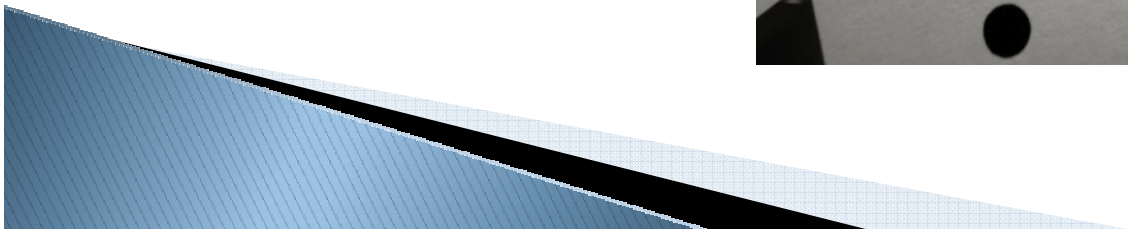
- ▶ Poor lab data quality, missing information
- ▶ Hospitals and physicians not onboard, *but we are getting closer*
- ▶ Decreasing budgets and increasing workloads
- ▶ ~~Poor communication between state and locals~~
- ▶ Lack of IT resources
- ▶ Speed



...but the light at the end of the tunnel is not always a train



questions?



I–NEDSS contact information

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